

CLAIMS

What is claimed is:

1 1. A probe tip alignment method for a precision liquid handler having a
2 probe drive system and a locator bed holding sample wells, said method comprising performing
3 the following steps:
4 inserting a probe tip with the probe drive system into a locator well at a known
5 position on the locator bed; and
6 determining the position of the probe tip in the locator well;
7 said determining step including moving the probe tip with the probe drive system
8 into contact with a plurality of points on the side wall of the locator well; and
9 sensing the contact of the probe tip against the side wall of the locator well.

1 2. The probe tip alignment method claimed in claim 1, said sensing step
2 including detecting electrical contact between the probe tip and the side wall of the locator well.

1 3. The probe tip alignment method claimed in claim 1, said moving step
2 including:
3 driving the probe tip back and forth along a first axis into contact with first
4 opposed points on a circular portion of the side wall of the locator well;
5 placing the probe at a point midway between the first opposed points;
6 driving the probe tip back and forth along a second axis orthogonal to the first
7 axis into contact with second opposed points on the side wall of the locator well; and
8 placing the probe at a point midway between the second opposed points.

1 4. The probe tip alignment method claimed in claim 3, said moving step
2 further including:
3 driving the probe tip back and forth along a third axis parallel to the first axis into
4 contact with third opposed points on the side wall of the locator well; and
5 placing the probe at a point midway between the third opposed points.